



**OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS RESOURCES MANAGEMENT
RADIATION SAFETY SECTION**



**RADIOLOGICAL ASSESSMENT REPORT
Radiation Protection Program Inspection**

PERMIT / CHIEF'S ORDER: **2014-541** REPORT NUMBER: **RAD-2019-049**
DATE OF INSPECTION: **5/3/2019** PREVIOUS INSPECTION: **2/11/2019**
COMPANY NAME: **Austin Master Services, LLC**
INSPECTION ADDRESS: **801 N. First Street**
Martins Ferry, OH Belmont
County

POINT OF CONTACT: **Troy Mazur, RSO** PHONE: **(740) 598-8514**

AUTHORIZED FORM(S) OF OIL & GAS TENORM WASTES (check all that apply)
 Solid Suspension Liquid

AUTHORIZED TOTAL POSSESSION LIMIT OF COMBINED Ra226 & Ra228 (Ci): **N/A**

TYPE OF INSPECTION CONDUCTED (check all that apply):
 Pre-scheduled Un-scheduled Routine Routine Follow-Up Special/For Cause

SUMMARY OF FINDINGS:

In Compliance Potential Items of Non-Compliance Observations of Concern

INSPECTOR(S):

Paul Carder 5/10/2019
Paul Carder Date
Senior Health Physicist

REVIEWED AND APPROVED:

Charles McCracken 5/10/2019
Charles McCracken Date
Radiation Safety Manager

A. ORGANIZATION AND SCOPE OF PROGRAM:

A final initial application for a Chief's Order was received on 10/30/14 and Chief's Order 2014-541 was issued on 11/26/14 authorizing the receipt and processing of liquid, suspension and solid oil & gas waste substances at the Austin Master Services – Martins Ferry (AMS-MF) location. Authorized activities include: transfer of containers delivered to the facility by truck to rail cars for eventual transport to disposal facilities outside of Ohio; stabilization of materials using cement kiln dust and/or approved stabilization agents to reduce the amount of free liquid in the container; Mixing of materials to reduce the over-all radiological concentrations in the resulting mixture; Packaging of mixed materials and loading of packages for disposal transport at Ohio landfills provided material meets Ohio EPA acceptance criteria for landfill disposal; Pressure washing, tank cleaning and decontamination; and containerized waste storage.

The AMS-MF Radiation Protection Program-Plan (RPP) currently in use is Revision 2, dated 12.19.2018 and was approved for implementation on January 8, 2019.

B. INCIDENT AND EVENT HISTORY:

Following a routine quarterly inspection at AMS-MF on 4/18/19, ODNR-Division of Oil & Resources Management (DOGRM) Facility Engineering staff informed DOGRM Radiation Safety (RSS) that AMS-MF was shredding used filter socks and filter cartridges in one of the concrete bins by the filter presses inside the process building. This mechanically destructive TENORM operation was not included in the application for a Chief's Order, in the approved RPP nor was there a radiological safety procedure for this operation. On 4/25/2019, RSS manager, Chuck McCracken spoke with Troy Mazur AMS-MF RSO and confirmed they were shredding filters. Mr. McCracken subsequently emailed a request to AMS-MF cease filter shredding operations until such time that RSS inspectors can evaluate the radiological safety of the operation.

1. OCCUPATIONAL DOSE MONITORING

The AMS-MF RPP contained a retrospective dose assessment based on historical radiation survey data from known exposure / work areas at the MF facility. Filter shredding was not considered in the approved dose assessment because it was not under consideration at the time.

2. PUBLIC DOSE / ENVIRONMENTAL MONITORING

Public dose / environmental monitoring was not specifically addressed in this RPP. During the field inspection, the RSO indicated that air sampling data had been collected during TENORM filter shredding operations. Air sample results were reviewed by RSS staff and were found to be below Ohio Administrative Code limits for occupational and public dose from airborne effluents.

3. ROUTINE AND EMERGENCY PROCEDURES

No radiation safety procedures exist for filter shredding operations.

C. INDEPENDENT AND CONFIRMATORY MEASUREMENTS:

General area dose rates inside the facility ranged from 9 uR/hr to 390 uR/hr. The highest dose rate found was 390 uR/hr on contact and 285 uR/hr at 30cm on a large "burrito" bag of waste waiting to be loaded into a gondola rail car destined for Waste Control Specialists (a LLRW disposal facility in Texas). All dose rates in unrestricted areas were < 2,000 uR/hr. The inspector performed his survey using a pre-use checked, Ludlum model 3019 uR survey meter, serial # 25012987 with a calibration due date of 12/26/2019.

D. Potential Items of Non-Compliance or OBSERVATIONS OF CONCERN:

The inspectors discussed the following with AMS-MF management during the inspection exit meeting:

- AMS-MF will no longer shred radioactive filter media in the open-air discharge manner it has been doing since March 2019.
- AMS-MF will develop a new process in which the shredder discharges into an enclosed container/box/tank, thereby eliminating the possible spread of contamination from the centrifugal discharge force from the shredder. Alternatively, a new process that doesn't use a shredder may be developed. After the new process has been developed, tested and works as designed, AMS will notify the Division and provide an opportunity to observe the new process prior to full scale commercial operation.
- AMS-MF will submit an updated retrospective dose assessment by a Certified Health Physicist that includes the occupational and public dose consequence from TENORM filter shredding operations at AMS-MF.

E. PERSONNEL CONTACTED DURING INSPECTION

*+@ Troy Mazur – AMS-MFRSO
*+@ Pete Collopy, CHP – ConsultantRSO

* Present at entrance meeting

+ Present/participated in the facility/field inspection

@ Present at exit meeting